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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/871,885	05/31/2001	Sohrab Mansouri	INL-052	2067

21323 7590 08/30/2004

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EXAMINER

NOGUEROLA, ALEXANDER STEPHAN

ART UNIT	PAPER NUMBER
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1753

DATE MAILED: 08/30/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/871,885	MANSOURI ET AL.	
	Examiner	Art Unit	
	ALEX NOGUEROLA	1753	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 August 2004 and 15 July 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 May 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>06162004</u> . | 6) <input checked="" type="checkbox"/> Other: <u>IDS of 07152004</u> . |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed June 16, 2004 have been fully considered but they are not persuasive.

Double patenting rejections

Applicants have amended 5, 11, and 18 to overcome 35 U.S.C. 112, second paragraph rejections. Claims 5-18 are still obvious over various claims in U.S. Patent No. 6,652,702, for the reasons set forth in the Office action of March 15, 2004.

Rejection of claims 1 and 3 as being anticipated under 35 U.S.C. 102(b) by Bryan

Applicants assert, "Bryan teaches passing a current to electrodes that are external to the membrane and electrodes of a sensor." See page 7 of the amendment of June 16, 2004 ("the Amendment"). However, Applicants have not amended claim 1 to require the electrode of claim 1 to be internal to the composite membrane. Unless otherwise specified, one with ordinary skill in the art at the time of the invention would construe an electrochemical sensor to not just be limited to the actual sensing electrode, per se, but to also include the housing in which the sensing electrode is contained along with any other electrodes therein or attached thereon. So with reference to Bryan, one with ordinary skill in the art could reasonably construe Figure 1, for

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example, as showing a complete electrochemical sensor comprising four electrodes (12, 13, 17, and 18). Indeed, element 8, which comprises two electrodes (12 and 13), is referred as a sensor (col. 2, ln. 60). Electrodes 17 and 18 serve to clean the membrane 14 to which electrodes 12 and 13 are internal. Electrodes 17 and 18 are connected to sensor 8 by bracket 9. Thus, the four electrodes of Figure 1 are not only functionally related but also form a single structurally integral unit, that is, a complete electrochemical sensor.

Rejection of claims 1-3 as being anticipated under 35 U.S.C. 102(b) by Nagata

Applicants assert, "Nagata does not teach or disclose applying an electrical potential to remove interfering agents from a polymeric composite membrane, as recited in independent claim 1." See page 7 of the Amendment. The examiner respectfully disagrees. As acknowledged by Applicants, "Nagata teaches an electrode refreshing device for removing substances formed on the surface of a working electrode." See page 7 of the Amendment. As seen from Figure 1 of Nagata the electrode is completely covered by membranes 14 and 16. So, the substances removed from the working electrode by the refreshing step must pass through these membranes. This implies that the membranes are free of interfering substances themselves.

Rejection of claim 1 as being anticipated under 35 U.S.C. 102(e) by Peat

Applicants assert, "Peat does not teach or disclose applying an electrical potential to remove interfering agents from a composite membrane comprising a polymeric membrane, as recited in independent claim 1. Instead, Peat teaches removing material from a steel micro-porous barrier." See page 7 of the amendment. The examiner respectfully disagrees. The micro-porous barrier in Peat does not have to be steel. None of the claims in Peat require the micro-porous barrier to be steel. Claim 3, in fact, requires the barrier to be made of non-electrically conducting material. Peat clearly recites that the micro-porous barrier may be made of an electrically conducting material, such as steel, or alternatively a non-electrically conducting material, such as a glass frit. See col. 1, ll. 28-51. An embodiment using a glass micro-porous barrier is discussed. See col. 4, ll. 4-16. Most especially, Peat also mentions a polymer or gel membrane. See col. 1, ll. 52-64.

Rejections of claims 2 and 4 as being obvious under 35 U.S.C. 103(a) over Bryan

Applicants rely on their argument against the rejection of claim 1 based on Bryan. Since the examiner has still deemed claim 1 to be anticipated by Bryan, for the reasons discussed above, claims 2 and 4 are still obvious over Bryan.

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Rejections of claims 2-4 as being obvious under 35 U.S.C. 103(a) over Peat

Applicants rely on their argument against the rejection of claim 1 based on Peat. Since the examiner has still deemed claim 1 to be anticipated by Peat, for the reasons discussed above, claims 2-4 are still obvious over Peat.

Rejections of claim 4 as being obvious under 35 U.S.C. 103(a) over Nagata

Applicants rely on their argument against the rejection of claim 1 based on Nagata. Since the examiner has still deemed claim 1 to be anticipated by Nagata, for the reasons discussed above, claim 4 is still obvious over Nagata.

Status of Objections and Rejections Pending since the Office action of March 15, 2004

2. The objection to the claims has been withdrawn.
3. All of the double patenting rejections are maintained.
4. All of the rejections under 35 U.S.C. 112, second paragraph, are withdrawn.
5. The rejection of claims 1 and 3 under 35 U.S.C. 102(b) as being anticipated by Bryan is maintained.

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6. The rejection of claims 1-3 under 35 U.S.C. 102(b) as being anticipated by Nagata is maintained.
7. The rejection of claim 1 under 35 U.S.C. 102(e) as being anticipated by Peat is maintained.
8. The rejections of claims 2 and 4 under 35 U.S.C. 103(a) as being obvious over Bryan are maintained.
9. The rejections of claims 2-4 under 35 U.S.C. 103(a) as being obvious over Peat are maintained.
10. The rejection of claim 4 under 35 U.S.C. 103(a) as being obvious over Nagata is maintained.

Information Disclosure Statement

11. Applicants are requested to provide, if available, copies of the Yoshito et al. article and WO 0165248 A, which were cited on the International Search Report cited on the IDS of July 15, 2004.

Final Rejection

12. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

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13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to ALEX NOGUEROLA whose telephone number is (571) 272-1343. The examiner can normally be reached on M-F 8:30 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, NAM NGUYEN can be reached on (571) 272-1342. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Alex Noguera
Primary Examiner
AU 1753
August 24, 2004